



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,910	11/16/2001	Randall L. Rayborn	1067-021	7379

7590

12/05/2005

Edward W. Rilee
MACCORD MASON PLLC
Post Office Box 2974
Greensboro, NC 27402

EXAMINER

KHAN, AMINA S

ART UNIT	PAPER NUMBER
----------	--------------

1751

DATE MAILED: 12/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/994,910

Applicant(s)

RAYBORN ET AL.

Examiner

Amina Khan

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/15/2002.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I, claims 17-69, in the reply filed on August 26, 2005 is acknowledged. Claim 138 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected Group II.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 17-19,23,44-58,60 and 62-65 are rejected under 35 U.S.C. 102(e) as being anticipated by Shoemaker et al. (US Publication US 2002/0034903).

The prior art of Shoemaker et al. teaches polyamide treatments which improve water wicking properties (page 3, paragraph 0025) comprising polymers containing poly(oxyethylene) adipamide and poly(hexamethylene) adipamide segments and chain branchers (page 2, paragraphs 0018 and 0023; page 3, paragraph 0026).

Shoemaker further teaches that the polymers can be prepared as described in US Patent 4,468,505. US Patent 4,468,505 teaches an equation for determining the percentage of reactants in the composition (column 2, lines 16-20). The examiner has modified this equation to determine the weight percentages of poly(oxyethylene)

diamine in the composition by replacing weight 6-6 salt in the numerator of the equation with weight poly(oxyethylene) diamine. The examiner then substituted the weights taught in example 1 (page 5, paragraph 0054) of Shoemaker into the modified equation of US Patent 4,468,505 to arrive at 58.4% poly(oxyethylene) diamine in the composition. 58.4% poly(oxyethylene) diamine meets all the claimed limitations for oxyalkylene derivative and oxyethylene derivative as claimed in claims 19,23,27,32,36 and 40.

Accordingly, the teachings of Shoemaker et al. anticipate the material limitations of the instant claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20-22,24-43,59 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shoemaker et al. (US Publication US 2002/0034903).

Shoemaker et al. is relied upon as set forth above. Shoemaker et al. does not teach the T-PACC vertical strip wicking test.

Shoemaker does teach a vertical strip wicking test (page 5, paragraph 0046), and improved wicking properties of treated fibers (page 1, paragraph 0009) however the testing parameters differ from those in the instant application (page 8, paragraph 0108)

and therefore cannot be compared. The patent office is unable to perform the T-PACC vertical strip wicking test.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to presume that the said T-PACC parameters would have been encompassed by the teachings of the prior art since the presumption is supported by the use of similar materials. The burden is on the applicant to prove otherwise.

Claims 66-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shoemaker et al. (US Publication US 2002/0034903) in view of McKinney et al (US Patent 4,975,325).

The primary reference of Shoemaker et al. is relied upon as set forth above. Shoemaker et al. does not teach 1-3% of polyamines and polyacids claimed in claims 67-69. However, Shoemaker et al teaches the inclusion of chain branching agents (page 2, paragraph 0018).

The secondary reference of McKinney et al. in the analogous art of nylon 66 polymer branching agents teaches 0.02 to 0.5 mole% of chain branching agent (column 3, lines 17-22). McKinney further teaches the branching agents trimesic acid (an isomer of trimellitic acid) and numerous other branching agents such as bishexamethylene triamine (column 7, lines 22-27). In the absence of evidence to the contrary, bishexamethylene triamine will perform equivalently to the triamines claimed in claim 67 of the instant application. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the compositions taught by Shoemaker et al. by incorporating the polyamines and polyacids taught by McKinney et al. because

Art Unit: 1751

McKinney teaches that polyamines are useful as chain extenders for nylon 66. The burden is on the applicant to prove otherwise.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amina Khan whose telephone number is (571) 272-5573. The examiner can normally be reached on Monday through Friday, 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Amina Khan, PhD
Patent Examiner
November 28, 2005



MARGARET EINSMANN
PRIMARY EXAMINER
GROUP 1100